

Remarks

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are requested.

Initially, it is noted that claim 36 has been amended so as to add a limitation related to a seal packing. Support for this limitation can be found at least at page 27, lines 14-27 of the original specification.

Claims 36, 37, 41 and 48-51 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Hanson (US 6,091,498) in view of Dordi (US 6,267,853) and Mariko (JP 05-331653). Claim 39 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Hanson in view of Dordi and Mariko and further in view of Ting (US 6,017,437). Claims 42-47 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Hanson in view of Dordi and Mariko and further in view of Dahms (US 5,849,171) or Dahms (US 5,433,840).

Regarding the above rejection of claim 36, it is noted that Dordi has a filing date of July 9, 1999 and an issue date of July 31, 2001. Further, the present application has an international filing date of August 11, 1999 and claims priority to three Japanese applications: JP 10-239490, filed on August 11, 1998; JP 11-30230, filed on February 8, 1999; and JP 10-220363, filed on August 3, 1999. It is noted that JP 10-239490 and JP 11-30230 have filing dates prior to the filing date of Dordi. Also, it is noted that claim 36 is supported by JP 10-239490 and JP 11-30230. Enclosed herewith are English language translations of JP 10-239490 and JP 11-30230 along with statements verifying the accuracy of the translations. As a result, Dordi can no longer be used as a reference against claim 36.

In light of the fact that Dordi can no longer be used as a reference against claim 36, it is apparent that the above-mentioned rejection of claim 36 is no longer applicable.

Further, it is submitted that claim 36 is patentable over the combination of Hanson, Dordi and Mariko, since claim 36 recites an apparatus including, in part, an electroless plating unit for performing an electroless plating process to form an initial layer on a substrate, wherein the electroless plating unit includes a seal packing to be brought into contact with the substrate, and a plating cell for forming a hermetically sealed space with the substrate and the seal packing, the hermetically sealed space having a volume sufficient for receiving a minimum amount of an electroless plating liquid required for the electroless plating process. The combination of

Hanson, Dordi and Mariko fails to disclose or suggest the electroless plating unit including the seal packing as recited in claim 36.

Hanson discloses a semiconductor processing tool 10 that includes an interface section 12, wafer transport units 62 and 64, and processing modules 20, 22 and 24. (See column 3, line 42 - column 3, line 43 and Figure 2). Hanson also discloses a plating module 810 dedicated to electrochemical copper deposition and a semiconductor processing station 900 that is specifically adapted to serve as an electroplating station. (See column 9, lines 8-25; column 20, line 65 - column 22, line 48; and Figures 11 and 33). However, as indicated in the rejection, Hanson fails to disclose or suggest an electroless plating unit. Further, Hanson necessarily fails to disclose or suggest an electroless plating unit including a seal packing and a plating cell for forming a hermetically sealed space with a substrate and the seal packing as recited in claim 36.

Additionally, it is noted that Dordi is relied upon as disclosing the premise of using electroless plating prior to the use of electrolytic plating for improved results. However, Dordi also fails to disclose or suggest the electroless plating unit including the seal packing as recited in claim 36.

Mariko discloses an electroless plating device including a plating cell 1 for plating a substrate 3. The plating cell 1 has a fixture 4 where the substrate 3 is placed during the plating process and the substrate 3 is held on the fixture 4 with suction provided by a suction opening 13. (See paragraphs [0002] - [0009] and Figure 1). While Mariko does disclose the plating cell 1 for plating the substrate 3, it is apparent that the plating cell 1 does not include a seal packing to be brought into contact with the substrate, so that the plating cell forms a hermetically sealed space with the substrate and the seal packing. As a result, Mariko fails to disclose or suggest the electroless plating unit including the seal packing as recited in claim 36.

In consideration of the above discussion, Hanson, Dordi and Mariko do not, either alone or in combination, disclose or suggest the electroless plating unit including the seal packing as recited in claim 36. Therefore, one of ordinary skill in the art would not have been motivated to modify or combine the references so as to obtain the invention as recited in amended claim 36.

As for (1) Ting, (2) Dahms ('840) and (3) Dahms ('171), these references are relied upon as disclosing (1) spinning a wafer 35 to enhance rinsing and drying, (2) an acid bath for the galvanic deposition of copper, and (3) an acid bath for copper plating, respectively.

However, Ting, Dahms ('840) and Dahms ('171) all fail to disclose or suggest the above-discussed electroless plating unit as recited in claim 36.

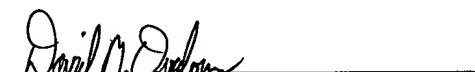
Because of the above-mentioned distinctions, it is believed clear that claims 36, 37, 39 and 41-51 are allowable over the references relied upon in the rejections. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 36, 37, 39 and 41-51. Therefore, it is submitted that claims 36, 37, 39 and 41-51 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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